

Enquiry N°: 880

Created by: DB / Checked by: PP

SERVO MOTOR 089LDA30XFGCJG100620-SGV1

AGV Solution Motor + Gearbox + Wheel + Brake



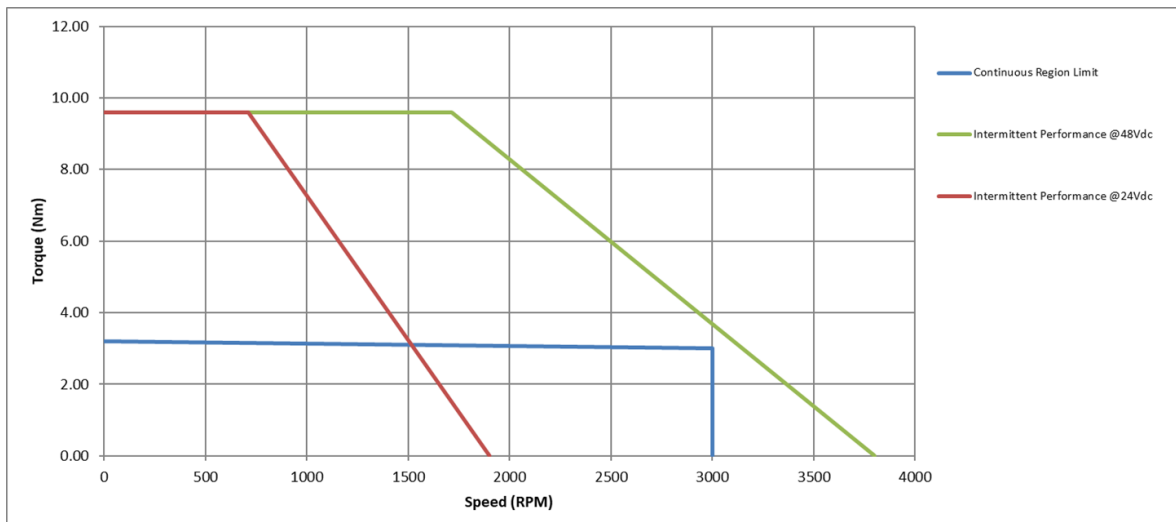
Definition

Type	Unimotor HD	
Frame Size (mm)	089	
Voltage	L	40-50V DC
Magnet type	D	D - High dynamic
Frame Length	A	
Speed (min-1)	30	3000 @ 48V - 1500 @ 24V
Brake	X	Braked
Connection type	F	Integrated Flying Cable
Output shaft	G	Integrated Gearbox Shaft
Feedback device code	CJ	CJ – Renco R35i encoder 4096 5PP push-pull comms
Inertia & thermistor	G	G – standard inertia + no thermistor
PCD (Gbox)	100	100 (Gear box)
Shaft Diameter	620	G BOX output
Insulation class	F	
UL Motor / UL Stator	UL Stator	

Nominal characteristics

Motor Ambient Temperature (°C)	0 to 40	Motor Ambient Storage Temperature (°C)	-15 to 40
Motor Peak Torque (Nm)	9.6		
Motor Stall Torque (Nm)	3.2	Stall Current	23.0
Rated Torque (Nm)	3	Rated Current (A)	21.6
Rated Power (kW) @ 48V	0.94	Rated Power (kW) @ 24V	0.47
Winding Thermal Time Constant (s)	93	Kt (Nm/A)	0.14
Number of Poles	10	Ke (V/kmin-1)	8.5
Maximum Cogging (Nm)	0.1	R (ph-ph) (Ohm)	0.08
Inertia Motor + GBox (kg.cm ²)	6.5	L (ph-ph) (mH)	0.43
Ingress Protection Level (IP)	40	Weight (kg) Motor + gearbox	6.5
Intermittent Torque (Nm)	4.8 (S3 Duty)		
Intermittent Power (kW)	0.7 (S3 Duty)	Intermittent Current (A)	34.29 (S3 Duty)
Brake	06 Type	Static Torque (N.m)	10.0
Release Time (ms)	72.8	Backlash (°)	0.45
Brake Supply Voltage (V)	24	Brake Coil Power (W)	18.5

Torque / speed graph



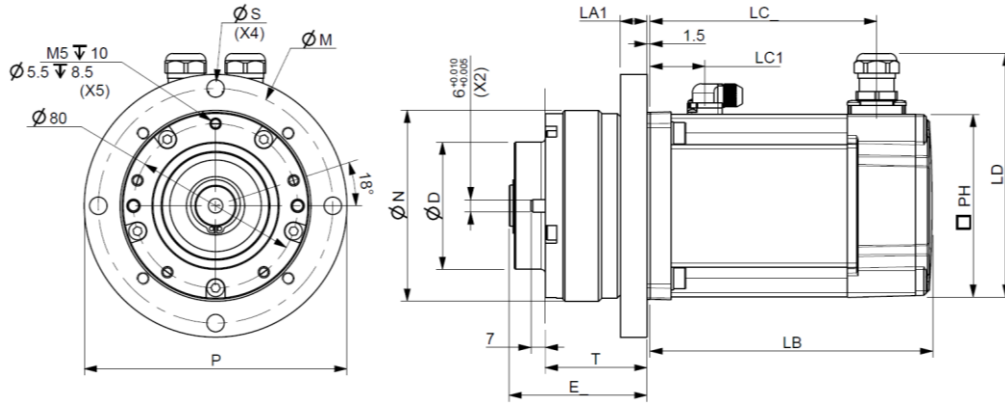
Version V1.0

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Motors (° & mm)

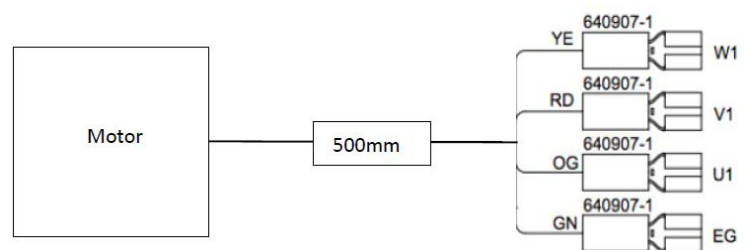
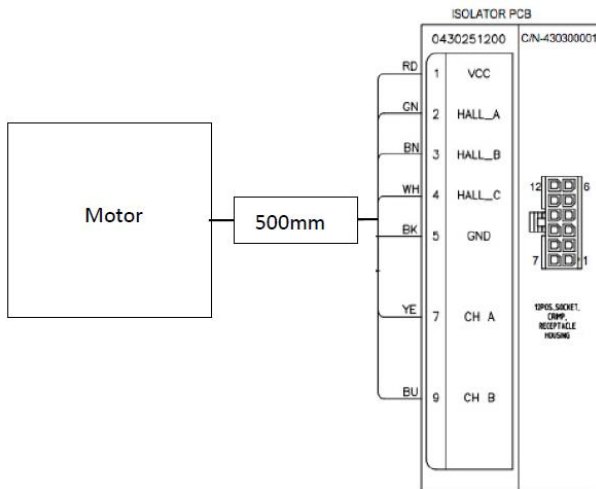


LB	Motor Total length	137.8±1
LC	Gland position	110.5±1
LA1	Flange thickness	13±0.1
T	Register Length	49.5±0.1
N	GBox Clearance Dia	93 h7
LD	Connector overall height	119±1
P	Flange GBox Dia	128
S	Fixing Hole Diameter	8.5
M	Fixing hole PCD	114.3
PH	Motor Housing Width	89±0.3
E	GBox Length	67.2
D	GBox Register Diameter	62±0.07
LC1	Brake Connector position	20.8±0.4
	Motor+Gbox Total Length	206.5
	Mounting Bolt	M8

Motor electrical interface Flying leads option:

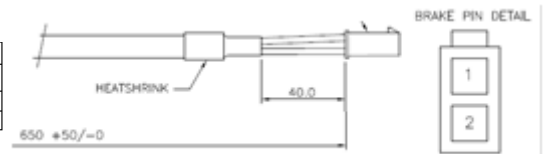
Feedback device code:						Connection type:		
CJ – Renco R35i encoder 4096 5PP push-pull comms								
1	Red	Power	7	Yellow	CH A	1	U	Red (x 1)
2	Green	HALL A	8		-	2	V	Orange (x 1)
3	Brown	HALL B	9	Blue	CH B	3	W	Yellow (x 1)
4	White	HALL C	10			4	Earth	Green/Yellow (x 1)
5	Black	GND	11					
6	Red		12					

SIG Cable (28 AWG): 500mm (from gland to customer end) 12-Way MOLEX Connector 43025-1200	PWR Cable: 500mm (from gland to customer end) 4 cores of 16 AWG UL 1330 wire, with polyolefin heat shrink sleeve Spade terminals fitted to lead wires
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**BRAKE CONNECTOR DETAIL
2 WAY MOLEX MALE**

BRAKE CONNECTION		
ZW END A	FUNCTION	COLOUR
1	+VE	WHITE
2	-VE	BLACK



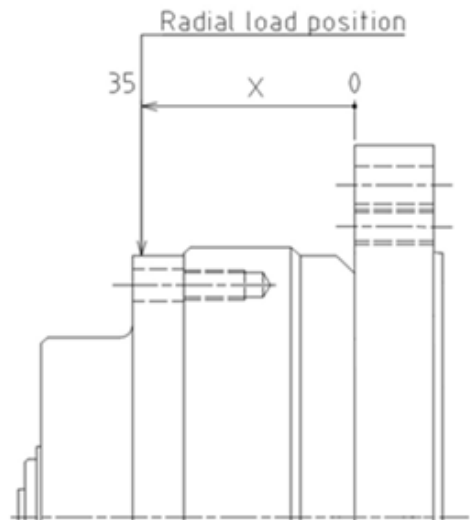
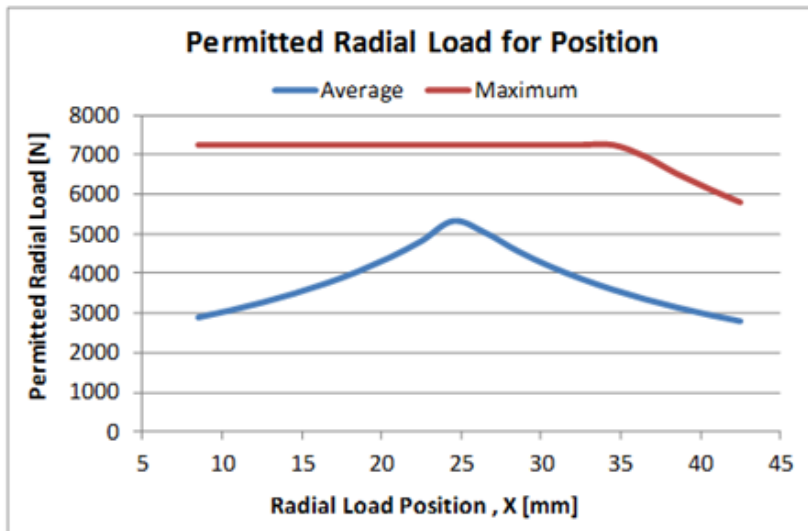
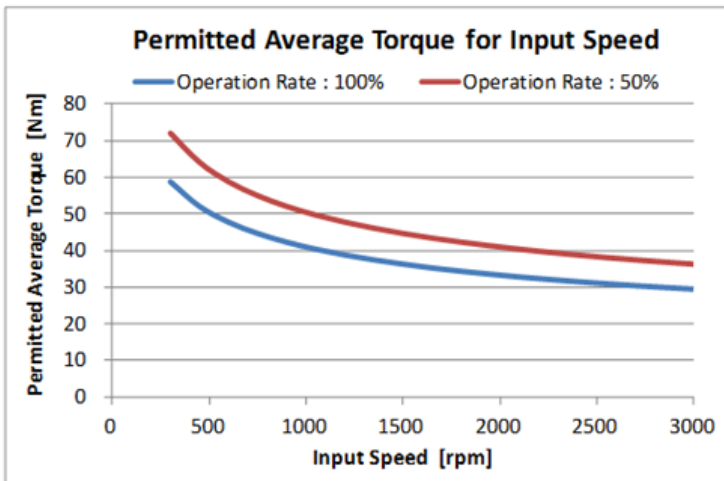
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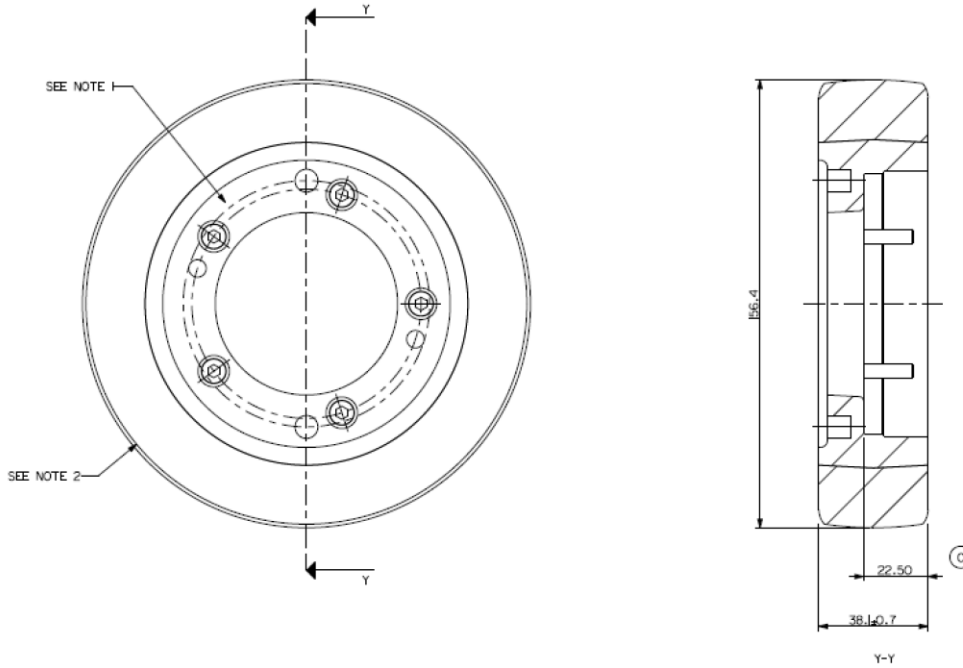
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Gear Box characteristics

Ratio	9	Backlash (arc/min)	≤7
Stages	1	Radial Load (Fr, N) @ Fa=0, Input Speed Nom	3500
Inertia (kg.cm ²)	~0.2	Radial Load MAX (Fr, N)	7250
Weight (kg)	2.7	Axial Load (Fa, N) @ Fr=0, Input Speed Nom	2200
Efficiency	95%		



Wheel Specification



- NOTES:
1. CORE INFORMATION
 - MATERIAL: HT200 CAST IRON.
 - FINISH: PAINT BLACK.
 2. TYRE INFORMATION
 - MATERIAL: POLYESTER BASED POLYURETHANE THERMOSET CASTABLE
 3. M5 x 15 CAP HEX B2P MOUNTING BOLTS (x4)